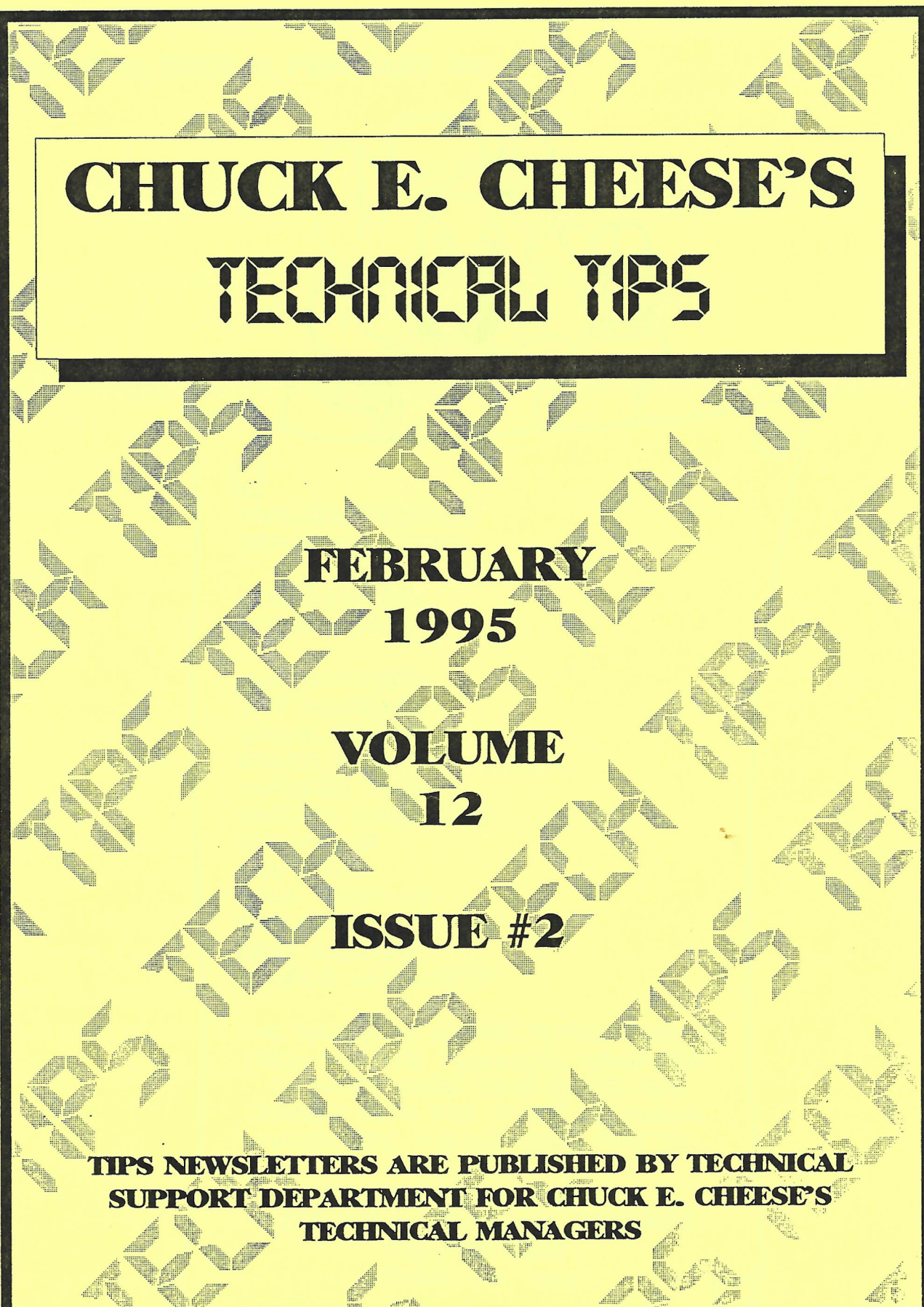




CHUCK E. CHEESE'S TECHNICAL TIPS

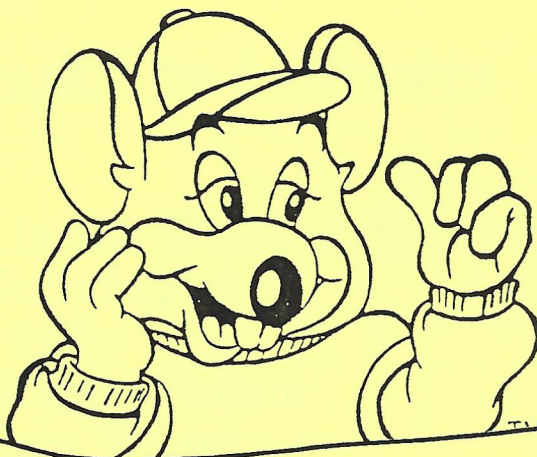
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THE MATERIAL IN THIS PUBLICATION IS
FROM YOU THE TECHNICAL MANAGER.
TO MAKE SURE YOUR IDEAS ARE
SHARED WITH THE OTHER TECHNICAL
MANAGERS, PLEASE SEND TIPS TO:

SHOWBIZ PIZZA TIME, INC.
ATTENTION: TECHNICAL ADVISORS
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IRVING, TX 75015

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WHAT'S HAPPENING IN THE WORLD OF PARTS

THREE STAGE CURTAIN FRINGE

Now available is the three stage curtain fringe at a low low cost of \$1.40 per/foot. When placing an order for this part, please refer to Part #21-043-035.



OLD STYLE FAT SUIT

The old style fat suit is still on sale for \$60.00 a (23% discount). There is only a few left, so place your orders before they are all gone. When placing an order for this part, please refer to Part #WZ-0014-00.

TECHNICAL TIPS

BY RANDY FROMM

SWAPPING PICTURE TUBES

Is it possible to use the picture tube from one monitor with the chassis of another? Sure! Under certain conditions that is.

First of all, when would you ever want to do such a thing? Well, perhaps you have a perfectly good CRT but the monitor chassis has been lost or damaged beyond repair. Sitting on the shelf next to it is a monitor that works perfectly well but the phosphors are burned so badly that the picture tube looks horrible. A host of other maladies can befall CRTs, making them unusable. Wouldn't it be nice to mate the good picture tube with the fully, functioning monitor chassis and create one good working monitor from the two bad ones? Sure it would!

How can you tell if the picture tube of one monitor will match the electronics of another? While there is no hard and fast rule for making these types of exchanges (transplants?) there are three things that I look for when I want to determine if I can swap picture tubes: The resistance of the deflection coils in the yoke, the neck size of the picture tube, and the pinouts of the CRT socket.

Use the Existing Yoke

Whenever possible, try to use the existing yoke that's already mounted on the picture tube. The position of the yoke is critical to the proper alignment of the three electron beams that shoot out of the red, green, and blue electron guns. If the yoke is not mounted perfectly, the colors will be all messed up. The monitor will be out of "convergence." It will probably be especially noticeable at the edges of the picture. If it's possible to leave the existing yoke in place, the factory alignment of the CRT will be preserved.

How can you tell if the yoke will work with the different monitor chassis? You can usually be assured of a pretty good match by using your meter to measure the DC resistance of each of the two coils in the yoke. The horizontal

deflection coil will have a low resistance. Somewhere around 2.4 ohms is typical for 13" or 19" monitors. Larger monitors such as 25" and 33" may have even lower resistances (as low as 1.3 ohms) as higher current levels are required to deflect the electron beams.

The resistance of the vertical deflection coil may vary quite a bit. The resistance in some monitors may be around 56 ohms. In others, the resistance of the vertical deflection coil may be approximately 15 ohms or less. As with the horizontal deflection coil, the resistance drops as the size of the picture tube increases. The resistance of the vertical deflection coil for a 25" or 33" CRT may be as low as 9 ohms.

Compare the resistances of the yoke coils on the bad CRT with the yoke on the good picture tube. If they're the same (or even pretty close) it will probably work. If you don't have the other yoke to compare to, you can try connecting it up just to see what happens.

However, it is possible that this may cause an overload situation if the monitor chassis is trying to power a yoke with too low a resistance. If the picture looks really distorted, the yoke is probably incompatible with the monitor chassis. Don't leave it on too long as you may damage the monitor circuitry. Most incompatibilities seem to show up in the vertical deflection coil of the yoke as they vary quite a bit in resistance.

Swapping Yokes

One way around the problem of yoke incompatibility is to use the yoke off the bad CRT and install it on the good picture tube. Swapping yokes requires removal and replacement of the purity and convergence ring assembly. This set of magnetic rings is used to align the three beams in the CRT. Since it sits between the yoke and the end of the picture tube, it has to be pulled off to allow the yoke to slide off after it.

If you mark the position of the purity and convergence ring assembly with a marking pen (like a Sanford "Sharpie" or Dennison "Marks-a-lot") prior to removal, you should be able to put it back in the exact position required for proper convergence. Its position on the neck and the rotation of the ring assembly are both critical, so be sure to mark both before removing the assembly for the neck of the picture tube.

After marking the position, loosen the screw that clamps the ring assembly in

- pin 1 - G3 (focus grid)
- pin 2 - not used
- pin 3 - not used
- pin 4 - not used
- pin 5 - G1 (control grid)
- pin 6 - GK (green cathode)
- pin 7 - G2 (screen grid)
- pin 8 - RK (red cathode)
- pin 9 - H (heater)
- pin 10 - H (heater)
- pin 11 - BK (blue cathode)

For the 22.5mm neck size, the pinouts are as follows:

- pin 1 - G3 (focus grid)
- pin 2 - not used
- pin 3 - BK (blue cathode)
- pin 4 - H (heater)
- pin 5 - H (heater)
- pin 6 - G1 (control grid)
- pin 7 - RK (red cathode)
- pin 8 - G2 (screen grid)
- pin 9 - KG (green cathode)

If the pinouts are the same, the CRT should be electrically equivalent. However, the plastic end cap that indexes the CRT pins to the CRT socket may not be the same. This may prevent mating the socket to the picture tube. On some CRTs this cap is loose and can be removed from the end of the neck. If so, you can slide the caps off and swap them between picture tubes. If the cap is glued on the end of the CRT, you probably will not be able to remove it. Remember, this is the most fragile part of the picture because the cap surrounds the nipple from which the air was originally evacuated from the picture tube. One false move and you'll break the seal and let air into the CRT (or as one of my Arcade School students put it, "you'll let the vacuum out!"). If the end cap is glued on, you'll probably have to leave it. In this case, you may be able to swap the CRT socket itself but it's a hassle and I don't usually make the CRT swap if I have to mess with it to that extent.

That's about all there is to it! Although you may not be successful in all cases, you've got nothing to lose by trying a CRT transplant. If it doesn't work, you will probably not wreck anything. If it does work, you'll have another monitor.

place and carefully slide it off the neck of the CRT. The ring assembly may be quite fragile due to extended exposure to the heat of the glowing CRT neck, so be cautious when you handle it.

Mark the position of the existing yoke on the neck of the good CRT. Loosen the yoke clamp and slide it off the neck of the picture tube. Don't throw it away! You may want to use it for a future transplant. Also, if the two yoke connectors are different, you'll want to remove the yoke wires and connector from the old yoke and install them on the replacement yoke. Be sure to mark which wires are for vertical and which are for horizontal! Remember, the horizontal pair has a much lower resistance than the vertical pair. If you screw this up, you'll probably blow out the vertical output transistors or fry some resistors on the monitor chassis.

Reinstall the replacement yoke in the exact same position on the CRT. Do the same with the purity and convergence ring assembly. With everything hooked up (and if you're lucky) you should have a perfectly good picture. If the picture is slightly out of convergence (the red, green, and blue components of the picture not all lined-up properly) try rocking the yoke slightly back and forth to bring the edges into proper alignment. Use the yoke wedges and clamp the yoke in place when you have a good picture. You should not have to touch the ring assembly as it has already been set for that tube. The ring assembly stays with its own picture tube and does not get swapped with the yoke! If you cannot converge the picture tube, you may have to go through the entire convergence procedure as outlined in the service manual. This can be a real pain but if the picture is unacceptable you'll have to do it.

Check the CRT

Of course, the yoke is only one of your considerations when you're swapping picture tubes. The other is the CRT itself. Look at the neck of the picture tube. Is it fat or skinny? We have two common sizes: 22.5 millimeter and 29.0 millimeter. Naturally, you cannot swap picture tubes if the neck diameter is different. I strongly discourage the swapping of neck boards between monitors! The neck board of a monitor is an integral part of the entire monitor design and should stay with the original monitor. Neck boards are not designed to be interchanged between monitor chassis!

If the neck size is the same, the swap will probably work. There are standard pinouts for the majority of the CRTs we use in videogames. For the 29.0mm neck size, the pinouts are as follows:

- pin 1 - G3 (focus grid)
- pin 2 - not used
- pin 3 - not used
- pin 4 - not used
- pin 5 - G1 (control grid)
- pin 6 - GK (green cathode)
- pin 7 - G2 (screen grid)
- pin 8 - RK (red cathode)
- pin 9 - H (heater)
- pin 10 - H (heater)
- pin 11 - BK (blue cathode)

For the 22.5mm neck size, the pinouts are as follows:

- pin 1 - G3 (focus grid)
- pin 2 - not used
- pin 3 - BK (blue cathode)
- pin 4 - H (heater)
- pin 5 - H (heater)
- pin 6 - G1 (control grid)
- pin 7 - RK (red cathode)
- pin 8 - G2 (screen grid)
- pin 9 - KG (green cathode)

If the pinouts are the same, the CRT should be electrically equivalent. However, the plastic end cap that indexes the CRT pins to the CRT socket may not be the same. This may prevent mating the socket to the picture tube. On some CRTs this cap is loose and can be removed from the end of the neck. If so, you can slide the caps off and swap them between picture tubes. If the cap is glued on the end of the CRT, you probably will not be able to remove it. Remember, this is the most fragile part of the picture because the cap surrounds the nipple from which the air was originally evacuated from the picture tube. One false move and you'll break the seal and let air into the CRT (or as one of my Arcade School students put it, "you'll let the vacuum out!"). If the end cap is glued on, you'll probably have to leave it. In this case, you may be able to swap the CRT socket itself but it's a hassle and I don't usually make the CRT swap if I have to mess with it to that extent.

That's about all there is to it! Although you may not be successful in all cases, you've got nothing to lose by trying a CRT transplant. If it doesn't work, you will probably not wreck anything. If it does work, you'll have another monitor.

TESTING SCRS AND TRIACS

Following is an excerpt from Star Tech Journal on testing SCRS and Triacs:

To test a SCR (Silicon Controlled Rectifier) the only tools you'll need will be an ohmmeter and jumper wire.

First, you'll connect the positive lead to the cathode and the negative lead to the anode and measure the resistance. Next, you'll switch the leads and the resistance will be practically the same (both resistances will read very high).

Now, if your ohmmeter is polarized correctly, you're now set up to connect the jumper wire from the anode to the gate. You'll now notice that the resistance has dropped to a low reading. This reading will remain low even when the jumper wire is removed because the gate has no control over the SCR once the diode begins conduction. See figure 1.

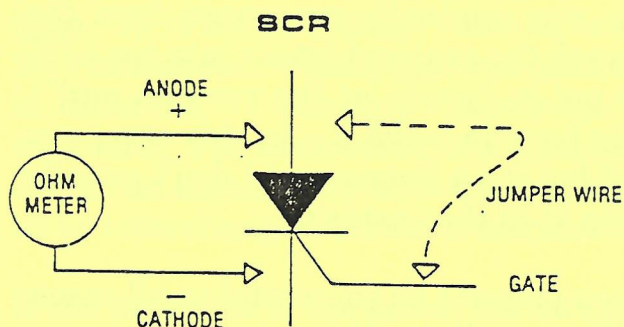


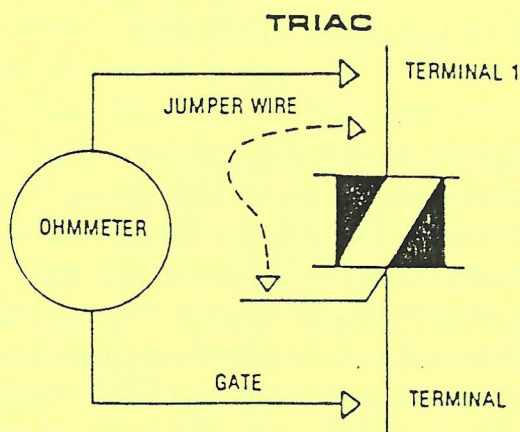
FIGURE 1

The next semiconductor that we are going to work with will be the triac.

First, for those of you who are not sure what a triac exactly is... an explanation: The triac is a semiconductor switch that is (for all practical purposes) the same as two SCRs connected in parallel with one inverted (both using a common gate). The triac will switch separately for each polarity of applied voltage and can be controlled (for both polarity conduction patterns) by a single gate electrode.

OK, if you don't understand this description, lets do a simple test to show the operation of a triac.

First, take a triac, ohmmeter, and jumper wire and connect them as shown in figure 2.



Notice that the jumper wire is not yet connected to the terminal 1 lead

FIGURE 2

In figure 2's configuration, your ohmmeter will read a near infinite resistance (the arm won't move on an analog meter, or the resistance will very high on a digital).

Now momentarily connect the jumper wire to terminal 1 and then you'll see that the resistance will have dropped to a very low reading. Disconnect the jumper and you'll still have a low reading. You have just tested one-half of the triac.

(Note: On a high voltage high amperage triac, a digital multimeter or a cheap analog meter may not provide enough current to switch the triac all the way on, so the conduction may not be maintained).

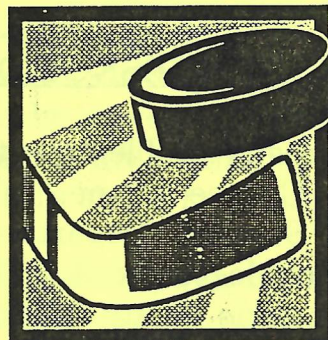
While the triac is still conduction, connect the jumper (already attached to the gate) to the terminal 2 (negative) and you'll again read a high resistance.

Short the gate to terminal 1 and the resistance should drop to a low reading. Remove the jumper and the resistance should remain low. Now the triac is totally tested.

KIDS WHAC-A-MUNCH, KIDS PATTIE CAKES, KIDS TIN CAN ALLEY

Please find attached a recommended spare parts list for Kids Whac-A-Munch, Kids Pattie Cakes, and Kids Tin Can Alley.

SUPER CHEXX



If a symptom such as a loud hum or buzz occurs in the Super Chexx game, and the noise can be removed by disconnecting the scorehead, the bridge rectifier on the main board is usually at fault. The board location is BR 1 and the I.C.E. Part Number is #2080.

HUNGRY HIPPO



When servicing a Hippo game, if a problem occurs with any one Hippo, remember that any part used with that Hippo is compatible with any other Hippo in the game. So, to isolate the problem to either a logic or mechanical fault, try swapping pieces from a working Hippo to the

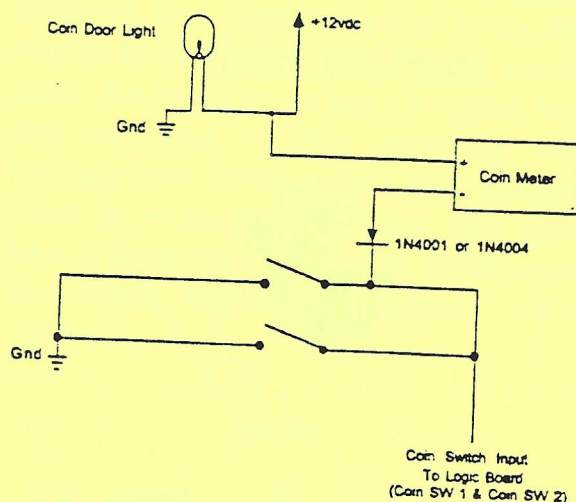
non-working piece. If the problem follows to the new location, the problem is with that part.

CHUCK E. CHEESE PHONE

If you have any problems with the Chuck E. Cheese phone, call the Technical Support Department if you are unable to fix it. Do not send the boards to any vendor for repairs.

JURASSIC PARK VIDEO

Sega has notified us that some of these games may not have the coin meters wired in. They have recommended the following wiring schematic.



To connect the coin meter in the Jurassic Park machine, you must do the following:

1. Turn off power to the machine.
2. Verify that there is a 12vdc coin meter installed in the game.

3. Verify that the coin door light is connected to +12vdc.
4. Cut the two wires that run from the coin meter.
5. Connect the positive wire to the +12 line on the coin door light (see figure).
6. Connect the negative wire to the N.O. side of the coin switch (see figure). Be sure to put a diode in series with the negative line (cathode side towards the coin switch). A common power diode such as a 1N4001 or 1N4004 can be used. The diode should be soldered to the wire then covered in shrink tubing or a good quality electrical tape to avoid possible shorts.

MONITOR GET WELL KITS

Attached, please find a copy of a monitor get well kit list provided by Zanen Electronics.

SAFETY SAFETY SAFETY

Please make sure you are taking all the necessary safety precautions when cleaning the ball crawl and the tubes. It might take a little more time to finish the job but the end result is going to be a clean ball crawl and a healthy you. Make certain all your game room attendants are also trained in safety. When it comes to making a cleaning checklist, put safety number one. Train your people not to climb the structure of the ball

crawl when cleaning it. Use a ladder every time and for the hard to reach areas, use a duster with a long handle extension. Practice safety not just sometime, but all the time.

EQUIPMENT CONSISTENCY

To ensure the equipment used in our entertainment package; i.e. show amplifier, microphones, etc... is consistent throughout the concept, before purchasing a new piece of equipment that is new to the package, call the Technical Support Department for recommendations.

This process will ensure consistency throughout the concept which makes future troubleshooting of the equipment easier.

LIFT DRAPE MAINTENANCE

Here are some items to look for while maintaining your Lift Drape System.

1. Wire the drape in the down position, inspect each weight to make sure it is properly crimped and secure.
2. Inspect all lift lines for wear, especially where they ride over the pulleys. Look for cracks in the plastic coating, exposed or broken strands, etc.
3. Inspect the main lift line for the same type of problem.
4. Open the drape while carefully watching for any signs of binding or jerky movement. If the drape does not lift smoothly, you must identify and correct the problem.
5. With the drape in the fully open position, make sure that the main lift line does not have excess tension on it. The cords should not be the "stopping mechanism" for the cylinder. If your cylinder looks like it has travel left at the bottom of the stroke, and the only thing keeping it from moving is the tension on the cords, then an external stop is required. This is a piece of 1 x 1 box aluminum that bolts directly to the baseplate to externally stop the cylinder from moving.
6. Check the air pressure on the system. A minimum of 60 psi is required.
7. Check your filter for water or other contaminants. If the porous filter appears dirty, it should be replaced. Replacements are available through the Parts Department.
8. The speed of the drape can be adjusted using a small straight blade screwdriver inserted into the flow control valve located at

the cylinder ports. If you want the drape to open faster, and the flow control valve is all the way open, then you need to increase the air pressure.

ROSETTA

Attached, please find a copy of the Chuck E. Cheese R12 version rosetta. This will replace your existing Chuck E. Cheese R12 version rosetta in your CyberStar manual.

NEW GAME DELIVERIES

With the increase in game deliveries to each of your locations, it is important to note a few critical steps for receiving and set up.

We have enclosed a skill game and kiddie ride checklist which are utilized in all new unit openings that we strongly recommend you to utilize for set-up.

Additionally, below is a list of points to be remembered.

1. Assure that a member of management receives the game.
2. Review the packing case for any signs of carton damage.
3. If any damage to the carton is noticed, you should immediately notify the driver.
4. Regardless of the "degree" of carton damage, you should note the problem on the bill prior to signing and/or accepting the freight.
5. In the event it appears that extensive damage may have occurred, you should contact Tom Ward at the Home Office before accepting the delivery. If Tom is unavailable, contact Gene Cramm or Technical Support for assistance.
6. In the event that a game is received with minor carton damage or upon uncrating you notice "concealed" damage, it is imperative to keep the original carton if a claim will be necessary. The freight companies will not accept any claim without the carton.
7. If it is necessary to file a claim, you should contact the local trucking company office and request that they dispatch an adjuster. You will also need to complete the appropriate paperwork in order for the claim to be filed. We will support you as much as possible from the Home Office but unfortunately, since we are unable to identify many of the specifics pertaining to the game; we will need your assistance.
8. All games are shipped to your

location on a prepaid basis. You should not accept any game with freight collect or C.O.D. If this should inadvertently occur, contact Tom Ward or Donna Leopoldus at the Home Office.

These steps should assist you in assuring that we are operating the highest quality equipment for our guests and if we may assist you in any manner, please give us a call.

GAMES DESTRUCTION PROCEDURES

Verify games destruction with Games Management. Final verification must come from Gene Cramm or Tom Ward.

1. Remove game asset tags and destroy.
2. Remove locks and coin mechanisms.
3. Game is to be photographed prior to destruction.
4. Game is to be destroyed completely. This includes cabinets, logic boards, monitors, power supplies, and control panels. Pictures of each destroyed component will accompany asset transfer sheet showing game as being scrapped.
5. Pictures and paperwork will be sent to Games Management, attention Tom Ward.

AVOID NEGATIVES AND ABSOLUTES

Avoid negative and absolute statements when you communicate with employees. Examples:

Negative: "Why can't you..."

Positive: "What if we..."

Negative: "I hate it when..."

Positive: "Wouldn't it be better if..."

Absolute: "He always says..."

Non-absolute: "I've heard him say..."

Absolute: "Nothing ever gets done right around here."

Non-absolute: "At times, we've had problems getting things done right."

Absolute: "We must do it this way."

Non-absolute: "Here's a good idea to consider."

Source: The Little Black Book of Business Etiquette, by Michael C. Thomsett, AMACOM Books, 135 W. 50th St., New York, NY 10020.



CONGRATULATIONS



Please join us in congratulating Jeff Aldridge and Bret Wooten on their new positions. Jeff Aldridge is leaving his position of technical advisor to tackle his new challenges in the Electronics Repair Center area. Bret Wooten is moving from the Entertainment Installation Department to the Technical Support Department to fill the vacant technical advisor's position.

I am certain that both Jeff and Bret will be successful in their new positions as both are very dedicated individuals.

HOW LOGICAL ARE YOU

The answer to last issue's brain teaser is as follows:

A total of nine coins are needed: four pennies, one nickel, two dimes, and one quarter.

KIDS PATTIE CAKES

E0003800	2 EACH 12VDC RELAY	BOB'S SPACE RACER
E0029030	3 EACH COIN DOOR LIGHTS (GE #161)	BOB'S SPACE RACER
E0013950	1 EACH PUSHBUTTON SWITCH (COLOR)	BOB'S SPACE RACER
	(INCLUDES BULB & SWITCH)	

KIDS TIN CAN ALLEY

N0003400	1 EACH CYLINDER	BOB'S SPACE RACER
E0003800	2 EACH 12VDC RELAY	BOB'S SPACE RACER
E0013975	1 EACH SWITCH, PHOTO SENSOR MICRO	BOB'S SPACE RACER
N0002600	1 EACH VALVE, 4-WAY AIR	BOB'S SPACE RACER
E0023600	2 EACH 2 AMP FUSE	BOB'S SPACE RACER
E0023750	2 EACH 5 AMP 250V FUSE	BOB'S SPACE RACER
E0024000	2 EACH 7-1/2 AMP FUSE	BOB'S SPACE RACER
MX008250	1 EACH TOY (SYLVESTER CAT) W/BACKET, LARGE	BOB'S SPACE RACER
M0004450	1 EACH BALLS, PLASTIC (BOX)	BOB'S SPACE RACER
N0001340	1 EACH FLOW CONTROL VALVE 1/8 (IF REPLACING	BOB'S SPACE RACER
	THE OLD STYLE OF FLOW CONTROL VALVE, CHANGE	
	TO NEW STYLE.)	

KIDS WHAC-A-MUNCH

PART #	DESCRIPTION	LOCAL VENDOR
E0003800	1 EACH 12VDC RELAY	BOB'S SPACE RACER
MX010003	1 EACH MUNCH W/SHAFT	BOB'S SPACE RACER
MX010100	2 EACH HAMMER, LARGE	BOB'S SPACE RACER
N0002500	1 EACH VALVE, 3-WAY AIR	BOB'S SPACE RACER
N0003200	1 EACH AIR CYLINDER	BOB'S SPACE RACER
N0002360	1 EACH VALVE LIMIT SWITCH (AIR SWITCH)	BOB'S SPACE RACER
N0002350	SWITCH, PRESSURE (AIR SYSTEM)	BOB'S SPACE RACER
E0024100	2 EACH 10 AMP FUSE	BOB'S SPACE RACER
MX010150	2 EACH KIDS HAMMER	BOB'S SPACE RACER

MONITOR GET WELL KITS

SAVES TIME AND MONEY ON MONITOR REPAIRS

Monitor repair kits take care of picture warping, blacking out, smearing, low brightness, and brightness problems, poor voltage regulation, jail bars, vertical shrinking, etc. Call for free technical help with your monitor problems. All kits come with complete instructions and are easy to install. WICO now distributes select get well kits.

Monitor repair kits which are currently available

- ◆ Kit # 101: For Electrohome GO7-CBO 19" color monitor. Includes 17 parts. \$7.95 ea. WICO part # 36-0243.
 - ◆ Kit # 102: For Electrohome GO7-FBO 13" color monitor. Includes 16 parts. \$7.95 ea.
 - ◆ Kit # 103: For Electrohome G19-411 13" color monitor. Includes 21 parts. \$7.95 ea.
 - ◆ Kit # 104: For Electrohome G802/805 19" B/W X-Y monitor. 9 parts. \$4.95 ea.
 - ◆ Kit # 201: For Wells-Gardner K4600 series 19" color monitor. 15 parts. \$6.95 ea. WICO part # 36-0244.
 - ◆ Kit # 202: For Wells-Gardner K4900 series 19" color monitor. 16 parts. \$7.95 ea. WICO part # 36-0248.
 - ◆ Kit # 203: For Wells-Gardner K4800 series 13" color monitor. 16 parts. \$7.95 ea.
 - ◆ Kit # 204: For Wells-Gardner K7000 series 13", 19", and 25", color monitor. 15 parts. WICO part # 36-0249. \$6.95 ea.
 - ◆ Kit # 206: For Wells-Gardner 19K6100 X-Y 19" color monitor. 30 parts. Includes 6 deflection transistors. \$14.95 ea.
 - ◆ Kit # 207: For Wells-Gardner K4500 series color monitor. 18 parts. \$6.95 ea.
 - ◆ Kit # 301: For Nintendo Sanyo 20-EZV(R-B,C) 19" color monitor. 16 parts. \$6.95 ea. WICO part # 36-0245.
 - ◆ Kit # 302: For Nintendo Sharp XM-1801N or XM-2001N 19" color monitor. 24 parts. \$7.95 ea.
 - ◆ Kit # 303: For Sanyo 14" color monitor. Includes 14 parts. \$6.95 ea.
 - ◆ Kit # 401: For Atari Disco 2090DT-2B 19" color monitor. 17 parts. \$6.95 ea.
 - ◆ Kit # 402: For Atari Disco AGM20M 19" medium resolution color monitor. 21 parts. \$7.95 ea.
 - ◆ Kit # 501: For Wico Videomaster 10" and 19" color monitor. 22 parts. WICO part # 36-0273 \$7.95 ea.
 - ◆ Kit # 601: For Korean Telcom AK901 9" and 13" color monitor. 21 parts. \$9.95 ea.
 - ◆ Kit # 602: For Sharp Image OC-1411 13" and 19" color monitor. 19 parts. \$7.95 ea.
 - ◆ Kit # 603: For Sega MC-2000 13" and 19" color monitor. 24 parts. \$7.95 ea.
 - ◆ Kit # 701: For Matsushita TM202G 19" color monitor. 17 parts. \$6.95 ea.
 - ◆ Kit # 801: For Hantarex MTC-900 color monitor. 21 parts. \$7.95 ea.
 - ◆ Kit # 802: For Hantarex MTC-9000 color monitor. 18 parts. \$7.95 ea.
 - ◆ Kit # 910: Nintendo Sanyo video inversion kit. Eliminates the need for a color inversion board. 15 parts. \$4.95 ea.
 - ◆ Kit # 920: For Pac Man, Ms Pac Man logic boards. Eliminates hum bar in picture. 4 parts. \$6.95 ea.
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 2SC1106 Transistor \$1.39 ea.
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 2SD871 Transistor (Toshiba).....\$4.49 ea.
 1.5 Amp GMA 20 x 5mm pigtail fuse..\$0.39 ea.

DISCOUNT!

Buy any 10 kits and take \$1.00 off each kit.

ZANEN ELECTRONICS
5023 52ND STREET
LUBBOCK, TEXAS 79414

Phone: 806-793-6337 Fax: 806-793-9136
 Visa and Mastercard accepted

DECEMBER 5, 1994

HEADER #8

HEADER #7

HEADER #6

HEADER #5

HEADER #2

HEADER #:

HEADER #2

HEADER #

TERMINAL #	CHUCK	JASPER	HEAD #3	HEAD #4	HEAD #5	AV CNTRLR	LIGHTS	HEAD #7	HEAD #8	LED #APS
TB1, 1-2	@	@	MOUTH	@	MOUTH	@	@	LIVE FLOOD	@	1
TB1, 3-4	A	A	HEAD L.	A	HEAD L.	A	A	LIVE STROBE	A	2
TB1, 5-6	B	B	HEAD R.	B	HEAD R.	B	B	PASQ DRUM	B	3
TB1, 7-8	C	C	LEFT ARM	C	HEAD UP	C	C	PASQ SPOT	C	4
TB1, 9-10	D	D	EYES R.	D	EYES R.	D	D	ORG LEG OUT	D	5
TB1, 11-12	E	E	EYES L.	E	EYES L.	E	E	HELEN SPOT	E	6
TB1, 13-14	F	F	RIGHT ARM	F	HAND	F	F	CEC STAR/ROPE LI	F	7
TB1, 15-16	G	G	EYES L.	G	EYES L.	G	G	CHUCK SPOT	G	8

APS BIT MONITOR

COORDINATE 0

1

2

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1

[illegible]

LOCATION _____ # _____

DATE _____

KIDDIE RIDE QUALITY INSTALLATION CHECKLIST

NAME _____

SOUND DB SETTING ____

ASSET NUMBER _____

SERIAL NUMBER _____

- ___ INSPECT FOR DAMAGE
- ___ VINYL ON INSIDE FLOOR OF RIDE (WHERE APPLICABLE)
- ___ TIME SET 45 SECONDS
- ___ SOUND SET FOR PLAYER TO HEAR AND ATTRACT MODE OFF
- ___ COIN MECHS ACCEPT TOKENS AND QUARTERS
- ___ ALL DOORS AND CASH BOXES SECURE WITH SHOWBIZ LOCKS AND PROPERLY PROGRAMMED
- ___ ALL LIGHTS ILLUMINATED
- ___ RIDES WITH LEVERS (GAME GOES DOWN WHEN LEVER RELEASED)
- ___ SAFETY BARS AND SWITCHES OPERATING AND DECAL AFFIXED
- ___ POWER CORD DRESSED
- ___ PROPER CLEARANCE GUIDELINES MET
- ___ MANUAL FILED IN TECH ROOM
- ___ NEGATIVE INSTRUCTIONS REMOVED
- ___ ACCESS DOOR KEYS PROPERLY SECURED INSIDE COIN MECH DOOR
- ___ THOROUGHLY CLEANED
- ___ MECHANICAL NON-RESETTABLE COIN METER HARDWIRED AND OPERATIONAL
- ___ LICENSE AFFIXED PROPERLY
- ___ SAFETY BELTS IN PLACE
- ___ PRICING DECALS TO READ QUARTER/TOKEN
- ___ ASSET TAG INSIDE OF COIN DOOR

Technician Date

Entertainment Installation Specialist Date

General Manager Date

Rev.: 1/8/95